



Australian Government

Assessment Requirements for MSL974028

Classify soils

Release: 1

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Modification History

Release	Comments
Release 1	This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>. Supersedes and equivalent to MSL974014 Classify soils. Foundation skills information added. Range of conditions removed. Assessment requirements amended.

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- correctly examined, analysed and classified at least 3 of the following samples:
 - gravel
 - sand
 - silt
 - clay
- accurately interpreted job requests, client specifications and the relevant requirements of *AS 1726-2017 Geotechnical site investigations*, or its replacement.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- terms, symbols and requirements of *AS 1726-2017 Geotechnical site investigations*, or its replacement, used to perform soil classifications as part of job role
- common purposes and client requirements for soil classifications conducted as part of job role
- differences between classification of soils for agricultural and engineering purposes
- common causes of misclassification of soils, such as:
 - identification of hard clay as sand or gravel
 - clayey gravels can have high plasticity
 - non-representative or contaminated samples
 - selecting inappropriate tests (e.g. clay-DCP and sand-penetrometer)
- testing methods used for soil classifications as part of job role
- common tests used to identify soil properties:
 - visual examination

- soil/water properties, including moisture content; liquid, dispersion and permeability
- material density tests
- particle size and shape tests
- soil deformation characteristics
- soil strength tests, including pocket penetrometer, standard penetration test, dynamic cone penetrometer and vane shear
- chemical tests, such as pH and organic matter
- awareness of environmental sustainability issues as they relate to the work task
- legal, ethical and work health and safety (WHS) requirements specific to the work task.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - access to job requests, client requirements, relevant site documentation and samples
 - workplace procedures, standards, test methods and equipment manuals
 - equipment and materials specified in test methods
 - safety clothing and equipment, including helmets, boots, gloves, earmuffs and glasses.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>